

### AMENDMENTS TO THE CLAIMS

Please cancel claims 1-2, 5-11, and 26-31 without prejudice. Please add new claims 66-68. A detailed listing of all claims in the application is presented below. This listing of claims replaces all prior versions and listings of the claims in the application. All claims currently amended are submitted with markings to indicate the changes relative to the immediate prior version of the claims. The changes in any amended claim are shown by strikethrough or double brackets (for deleted matter) or underlined (for added matter).

#### Listing of Claims:

1 – 46 (canceled).

47 (currently amended). A recombinant DNA comprising said DNA selected from the group consisting of

- a) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 3 wherein the protein elicits an immune response against *E. canis*;
- b) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;
- c) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ.ID. NO. 7 wherein the protein elicits an immune response against *E. canis*;
- d) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*; and

e) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 11 wherein the protein elicits an immune response against *E. canis*.

48 (currently amended). A vector capable of expressing a recombinant DNA comprising:

a) a recombinant DNA inserted into said vector such that a recombinant protein is expressed when said vector is provided in an appropriate host wherein said DNA is selected from the group consisting of:

i) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 3 wherein the protein elicits an immune response against *E. canis*;

ii) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;

iii) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 7 wherein the protein elicits an immune response against *E. canis*;

iv) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*; and

v) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 11 wherein the protein elicits an immune response against *E. canis*[[; and]]

~~vi) any portion of said DNA above that encodes a protein that elicits an immune response against *E. canis*.~~

49 (original). The recombinant DNA of claim 47 wherein said DNA encodes at least one immunogenic epitope.

50 (currently amended). A vector capable of expressing a recombinant DNA comprising:

- a) a recombinant DNA inserted into said vector such that a recombinant protein is expressed when said vector is provided in an appropriate host wherein said DNA is selected from the group consisting of:
  - i) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 3 wherein the protein elicits an immune response against *E. canis*;
  - ii) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;
  - iii) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 7 wherein the protein elicits an immune response against *E. canis*;
  - iv) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*; and
  - v) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 11 wherein the protein elicits an immune response against *E. canis*.

51- 65 (canceled).

66 (new). The recombinant DNA of claim 47 comprising said DNA selected from the group consisting of:

- b) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;
- c) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 7 wherein the protein elicits an immune response against *E. canis*; and
- d) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*.

67 (new). The vector of claim 48 wherein said DNA is selected from the group consisting of:

- ii) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;
- iii) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 7 wherein the protein elicits an immune response against *E. canis*; and
- iv) a recombinant DNA sequence that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*.

68 (new). The vector of claim 50 wherein said DNA is selected from the group consisting of:

- ii) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 5 wherein the protein elicits an immune response against *E. canis*;

- iii) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 7 wherein the protein elicits an immune response against *E. canis*; and
- iv) a recombinant DNA that encodes a protein having an amino acid sequence as shown in SEQ. ID. NO. 9 wherein the protein elicits an immune response against *E. canis*.